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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,826	08/17/2006	Andrea De Luca	NOTAR-038US	9661

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EXAMINER	
MOK, ALEX W	
ART UNIT	PAPER NUMBER
2834	
MAIL DATE	DELIVERY MODE
04/26/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,826	DE LUCA ET AL.	
	Examiner	Art Unit	
	ALEX W. MOK	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 January 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Amendment

1. Acknowledgement is made of Amendment filed January 25, 2010.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimmel et al. (US Patent No.: 6543712) in view of Lewis et al. (US Patent No.: 4643592).

For claim 19, Grimmel et al. teach a laying head for forming coils using continuous and substantially rectilinear rolled products comprising a support structure (reference numeral 36, figure 1), a rotor (reference numeral 12) adapted to rotate about its own axis (reference numeral 22) under the action of motor means and held in rotation by the support structure by means of bearings (reference numerals 16, 20), characterized in that there are only two bearings and at least one of the two bearings incorporates vibrations damping means (see figures 1, 4). Grimmel et al. do not specifically disclose the vibrations damping means comprising an oil film bearing of the hydrodynamic type.

Lewis et al. disclose bearings for a rotating machine using oil (reference numerals 1, 14, 15, 16, 17, figure 1, see column 5, lines 40-44), and also disclose the film bearings for the use of hydraulics (see column 5, lines 64-68), which constitutes the hydrodynamic type.

It would have been obvious to include the oil film bearing of the hydrodynamic type as disclosed by Lewis et al. in the invention of Grimmel et al. since Lewis et al. also use this technique for vibrations (see the Abstract), and a person of ordinary skill would have applied this configuration for reducing the vibrations in the layer head.

For claim 20, the structure illustrated in figure 1 of Grimmel et al. disclose each of the bearings in Grimmel et al. being joined to the pressing device, which can be considered to incorporate the vibrations damping means.

For claim 21, Grimmel et al. disclose the claimed invention except for at least one axial type hydrodynamic bearing being provided in proximity of a rolled product inlet side. Lewis et al. disclose the hydrodynamic bearing as explained for claim 19 above, and this would be in proximity of the rolled product inlet side when applied to the invention of Grimmel et al. (see figure 1). It would have been obvious to modify the rolled product inlet side of Grimmel et al. to have the bearing of Lewis et al. be in proximity, since this would further enhance the reliability of the device for reducing the vibrations, and would also achieve acceptable engineering costs.

For claim 22, Grimmel et al. teach the claimed invention except for the hydrodynamic bearing being of the "tilting pad" type. Lewis et al. disclose the bearing being a “tilting pad” (see column 5, lines 44-48), and it would have been obvious to

include the tilting pad of Lewis in the invention of Grimmel et al. since this would further provide vibration reduction in the device.

4. Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimmel et al. and Lewis et al. as applied to claims 19 and 20 above, and further in view of Raimondi (US Patent No.: 3680932).

For claim 23, Grimmel et al. and Lewis et al. disclose the claimed invention except for the hydrodynamic bearing being of the lobed type. Raimondi discloses the bearings having lobes (figures 8, 10, 12, see column 3, lines 1-10). It would have been obvious to have the lobed type bearings as disclosed by Raimondi in the inventions of Grimmel et al. and Lewis et al. since Raimondi uses this technique to provide bearing stability (column 1, lines 25-28), the same problem the claimed invention is concerned with.

For claims 24-26, Grimmel et al. and Lewis et al. disclose the claimed invention except for the hydrodynamic bearing being provided with three lobes, two lobes, or the arrangement of the lobes on the bearing being asymmetrical. Raimondi discloses the bearing having two or three lobes, and the lobes being asymmetrical (see figures 8, 10, 12). It would have been obvious to include two, three lobes and the asymmetrical configuration as disclosed by Raimondi et al. in the inventions of Grimmel et al. and Lewis et al. since this would further limit the number of structural elements and enhance the reliability of the system.

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grimmel et al. and Lewis et al. as applied to claim 19 above, and further in view of Dede (US Patent No.: 6135639).

For claim 27, Grimmel et al. and Lewis et al. disclose the claimed invention except for the oil film bearing being of the "squeeze film" type. Dede discloses the bearing of the squeeze film type (reference numeral 110, figure 1). It would have been obvious to include this squeeze film type bearing as disclosed by Dede in the inventions of Grimmel et al. and Lewis et al. for the purpose of further improving the means of reducing vibrations in the device.

Response to Arguments

6. Applicant's arguments filed January 25, 2010 have been fully considered but they are not persuasive. In response to the reference of Grimmel et al. not disclosing the features of new independent claim 19, the reference of Grimmel et al. does teach a pressing device in figures 1 and 4, and this particular component can constitute the vibration dampening means being incorporated into at least one of the two bearings, since this pressing component is illustrated to be joined to at least one of the bearings in figure 1, and one embodiment of the pressing component is the magnetic bearings (reference numeral 44) which applies a magnetic force to the rotor and this force can be controlled (see column 3, lines 19-22), and this magnetic force would be able to reduce the vibrations in the laying head. In response to a person of ordinary skill being unlikely to combine the teachings of Grimmel et al. and Lewis et al. because they are from

different technical fields, the reference of Lewis et al. still clearly discloses the invention being used for limiting vibrations in rotor machines (column 1, lines 64-68) through the use of oil, hydraulic bearings. Even though there may be a supposed difference in the technical fields disclosed between the references of Grimmel et al. and Lewis et al., this does not prevent a person of ordinary skill from considering the invention of Lewis et al. as its disclosure is related to the problem of reducing the vibrations with bearings, the same problem the applicant is concerned with, and therefore would still be pertinent and would commend itself to the inventor's attention.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX W. MOK whose telephone number is (571)272-9084. The examiner can normally be reached on 7:30-5:00 Eastern Time, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen P. Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quyen Leung/
Supervisory Patent Examiner, Art Unit 2834

/A. W. M./
Examiner, Art Unit 2834